

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US2004/004992

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09J167/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 711 842 A (KEMMISH DAVID JOHN) <i>0</i> 27 January 1998 (1998-01-27)  column 1, line 14 - column 2, line 37; claims; examples	1-35, 43-45, 48, 52-54, 60-63, 70, 71
X	DE 44 30 415 A (BUNA GMBH) <i>2</i> 14 March 1996 (1996-03-14)  column 1, line 64 - column 2, line 6 claims; examples  ----- -/-	1-35, 43-45, 48, 52-54, 60-63, 70, 71

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

\*A\* document member of the same patent family

Date of the actual completion of the international search

8 July 2004

Date of mailing of the international search report

19/07/2004

Name and mailing address of the ISA

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Authorized officer

Masson, P

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15 JUL 2004  
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PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43*bis*.1)

Applicant's or agent's file reference  
see form PCT/ISA/220

See paragraph 2 below

Priority date (day/month/year)  
21 02 2003

Applicant  
**METABOLIX INC.**

- 1. This opinion contains indications relating to the following items:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Box No. I    | Basis of the opinion   |
| <input checked="" type="checkbox"/> Box No. II   | Priority   |
| <input type="checkbox"/> Box No. III             | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/> Box No. IV              | Lack of unity of invention   |
| <input checked="" type="checkbox"/> Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI              | Certain documents cited  |
| <input type="checkbox"/> Box No. VII             | Certain defects in the international application   |
| <input checked="" type="checkbox"/> Box No. VIII | Certain observations on the international application  |

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Authorized Officer \_\_\_\_\_

Masson, P.

Telephone No. +49 89 2399-2051



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/004992

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**Box No. 1 Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
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International application No.  
PCT/US2004/004992

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

- ☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-75
Inventive step (IS)	Yes: Claims	
	No: Claims	1-75
Industrial applicability (IA)	Yes: Claims	1-75
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2004/004992

**Cf V:**

**Reference is made to the following documents:**

- D1: US-A-5 711 842 (KEMMISH DAVID JOHN) 27 January 1998 (1998-01-27)
- D2: DE 44 30 415 A (BUNA GMBH) 14 March 1996 (1996-03-14)
- D3: WO 97/04036 A (PROCTER & GAMBLE) 6 February 1997 (1997-02-06)
- D4: EP-A-0 553 394 (NAT STARCH CHEM INVEST) 4 August 1993 (1993-08-04)
- D5: DATABASE WPI Section Ch, Week 199404 Derwent Publications Ltd., London, GB; Class A17, AN 1994-032009 XP002287554 & JP 05 339557 A (MITSUI TOATSU CHEM INC) 21 December 1993 (1993-12-21)
- D6: WO 94/10257 A (NAT STARCH CHEM INVEST) 11 May 1994 (1994-05-11)
- D7: EP-A-0 741 177 (NAT STARCH CHEM INVEST) 6 November 1996 (1996-11-06)
- D8: WO 96/05264 A (MINNESOTA MINING & MFG) 22 February 1996 (1996-02-22)
- D9: WO 95/10577 A (FULLER H B LICENSING FINANC) 20 April 1995 (1995-04-20)
- D10: WO 02/10303 A (ABE HIDETOSHI ; TAKAMATSU YORINOBU (JP); 3M INNOVATIVE PROPERTIES CO ) 7 February 2002 (2002-02-07)
- D11: US-B-6 472 5021 (JURGENS CHRISTIAN ET AL) 29 October 2002 (2002-10-29)
- D12: EP-A-1 236 753 (HYCAIL B V) 4 September 2002 (2002-09-04)
- D13: US-A-5 192 612 (OTTER JAMES W ET AL) 9 March 1993 (1993-03-09)
- D14: DATABASE WPI Section Ch, Week 200003 Derwent Publications Ltd., London, GB; Class A23, AN 2000-033687 XP002287555 & JP 11 302521 A (SHIMADZU CORP) 2 November 1999 (1999-11-02)
- D15: DATABASE WPI Section Ch, Week 200233 Derwent Publications Ltd., London, GB; Class A81, AN 2002-285642 XP002287556 & JP 2001 316658 A (3M INNOVATIVE PROPERTIES CO) 16 November 2001 (2001-11-16)
- D16: US-A-5 502 158 (LIPINSKY EDWARD S ET AL) 26 March 1996 (1996-03-26)
- D17: US-A-4 511 687 (NAKASHIMA NAOKI ET AL) 16 April 1985 (1985-04-16)

16)  
D18: WO 95/20615 A (PROCTER & GAMBLE) 3 August 1995 (1995-08-03)  
D19: US-A-5 646 217  
D20: EP-A-1 193 294

**Article 33(2) PCT:**

**Claim 1 :**

**Claim 1** discloses an adhesive composition comprising a PHA.

**Document D1** discloses the same combination of technical features as disclosed in **claim 1** (column 1, line 14 to column 2; line 37, claims and examples).

The same remark applies also to **documents D2** (column 1; line 64 to column line 6, claims and examples), **D3** (page 2; line 27 to page 3; line 27, page 15; lines 5 to page 18; line 2; claims and example 2), **D4** (page 2; line 23 to page 3; line 17, claims and examples), **D5, D6** (page 2; line 14 to page 4; line 14, claims and examples), **D7** (page 2; line 30 to page 3; line 34, claims and examples), **D8** (page 3; line 1 to page 4; line 7, page 5; line 27 to page 6; line 15, page 7; line 16 to page 8; line 18, claims and examples), **D9** (page 2; line 31 to page 3; line 16, page 9; lines 17 to 25, examples), **D11** (column 2; lines 3 to 43, claims and examples), **D12** (§ 12-13, claims, examples 3-4), **D16** (column 4; line 46 to column 5; line 15, column 10; line 31 to column 12; line 25, column 23; line 52 to column 24; line 25, claims and examples), **D17** (column 1; lines 7 to 16, claims, comparative examples 1 to 8) and **D18** (page 5; pages 12 to 14, 32 to 34 and example 17).

Thus, the subject matter of **claim 1** does not meet the requirements of Article 33(2) PCT.

The same considerations apply to the subject matter of **claims 43, 52, 60, 64, 67, 70 and 71** as well as to the subject matter of **dependent claims 2 to 35, 40 to 42, 44 to 45, 48 to 51, 53 to 54, 57 to 59, 61 to 63 and 65 to 66** which contain merely conventional embodiments of **claims 1, 43, 52, 60, 64 and 67**.

**Claim 72:**

**Claim 72** discloses an adhesive composition.

**Document D9** discloses the same combination of technical features as disclosed in **claim 72**.

The same remark applies also to **document D14**.

Thus, the subject matter of **claim 72** does not meet the requirements of Article 33(2) PCT.

The same considerations apply to the subject matter of **independent claims 73, 74 and 75** as well as to the subject matter of **dependant claims 36 to 39, 46 to 47 and 55 to 56** which contain merely conventional embodiments known from the prior art.

**Article 33(3) PCT:**

The subject matter of **claims 1 to 75** does not meet the requirements of Article 33(3) PCT.

**Article 33(4) PCT:**

The subject matter of **all claims** is capable of industrial applicability.

**Cf VIII:**

**Claims 1, 43, 52, 60, 64, 67, 70 to 75** are not clear since the conditions in which the physical properties of the adhesive composition are measured are not indicated. Furthermore such properties represent merely the technical goal to be achieved. It is also to be pointed out that some essential features lack in these claims since in the examples which represent adhesive compositions comprising PHA, not all the compositions possess the properties disclosed in the claims, especially the peel bond

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strength of at least  $10 \text{ Nm}^2$ .